

PENDING CLAIMS

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3 1. A method for a computer repairing itself, the method comprising the
4 computer-executed steps of:

5 booting from a first boot device;
6 then, in response to a signal indicating a need for repair, booting from a
7 second boot device; and
8 then repairing software on the first boot device while booted from the second
9 boot device.

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11 2. The method of claim 1, wherein the step of repairing software comprises:
12 copying software from a device other than the first boot device onto the first
13 boot device.

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15 3. The method of claim 1, wherein the step of repairing software comprises:
16 copying software from the second boot device onto the first boot device.

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18 4. The method of claim 1, wherein the step of repairing software comprises
19 copying template, backup and/or archive software from a device other than the
20 first boot device onto the first boot device.

21
22 5. A method for a computer repairing itself, the method comprising the
23 computer-executed steps of:

24 booting from a first boot device;
25 then, in response to a signal indicating a need for repair, booting from a
26 second boot device; and
27 then, while booted from the second boot device, copying template, backup
28 and/or archive software from the second boot device onto the first boot device.

29
30 6. A method for a computer repairing itself to an operational status at any time
31 during operation, the method comprising the computer-executed steps of:

32 booting from a first hard disk drive boot device disposed within a main computer
33 hardware box of the computer;

1 then, in response to receiving a signal indicating a need for repair of the computer
2 during the booting or during any operating state, booting from a second hard disk drive boot
3 device; the second hard disk drive boot device being physically present within the main
4 computer hardware box of the computer prior to receiving the signal indicating a need for
5 repair; and

6 then repairing software on the first hard disk drive boot device while booted from the
7 second hard disk drive boot device and selectively either: (i) maintaining operation of the
8 computer from the second boot device to restore operational status of the computer during
9 repairing of the software on the first hard disk device, or (ii) changing to operation of the
10 computer from the second boot device to the first boot device to restore operational status of
11 the computer.

12 7. The method of claim 6, wherein the step of repairing software further
13 comprises:

14 copying software from a device other than the first boot device onto the first boot
15 device, said device other than said first boot device being either said second boot device or a
16 third device different from said first boot device and said second boot device; and

17 said copying of software including the copying of any application, operating-system,
18 repair-process software, template, backup, archive software, boot record, a partition table,
19 and a basic input-output system (BIOS).

20 8. The method of claim 6, wherein the step of booting from a second boot device
21 comprises:

22 automatically under computer control altering identification jumpers of a data storage
23 device to be switched to logically and physically switch the second boot device to make the
24 second boot device bootable.

25 9. The method of claim 6, wherein the signal indicating a need for repair is
26 either: (i) self-generated by the computer without human intervention; or (ii) generated by
27 the computer in response to a single action by an external user, said single action selected
28 from the set of actions consisting of: pressing a key or combination of keys on a keyboard of
29 the computer and pressing or changing the state of a physical switch different from an on-off

1 switch of the computer and exposed on an exterior surface of the main computer hardware
2 box of the computer.

3 10. The method of claim 6, wherein the step of repairing software comprises:
4 automatically repairing software on the first boot device according to preset preferences
5 without further direction from the user, the preset preferences designating to repair the
6 computer according to whether: to recover data, to run a virus check, to reformat the first
7 boot device, to revert to a backup, or to run diagnostics.

8 11. The method of claim 6, wherein the step of repairing software comprises:
9 reformatting the first boot device and then copying software onto the first boot device; or
10 resetting parameters in a persistent memory and then copying software onto the first boot
11 device.

12 12. The method of claim 6, wherein:

13 before booting from the second boot device, software is installed onto the second boot
14 device; and the installing software onto the second boot device comprises one of: (a)
15 installing software onto the second boot device; (b) copying installed software onto the
16 second boot device; (c) copying installation software onto the second boot device; and (d)
17 writing onto the second boot device a version of an operating environment running as a result
18 of the boot from the first boot device; and

19 after the installing software onto the second boot device and before the booting from
20 the second boot device, protecting the second boot device from further modification; the
21 protecting selected from the set of protective measures consisting of (i) switching the second
22 boot device to a state of unavailability; and (ii) switching the second boot device to a read-
23 only state.

24 13. The method of claim 6, wherein:

25 the step of repairing software further comprises copying software from the second
26 boot device onto the first boot device;

27 the step of copying software further comprises copying any of application, operating-
28 system and repair-process software, and copying any of a boot record, a partition table, and a
29 basic input-output system (BIOS);

1 the step of repairing software further comprises copying one of template, backup and
2 archive software from a device other than the first boot device onto the first boot device;

3 the step of repairing comprises copying one of template, backup and archive software
4 from the second boot device onto the first boot device;

5 the step of booting from a second boot device comprises switching the second boot
6 device to make the second boot device bootable;

7 the step of switching comprises generating the signal indicating a need for repair;

8 the step of booting from a second boot device comprises one of logically switching
9 the second boot device, and physically switching the second boot device; and the step of
10 physically switching comprises altering identification jumpers of a data storage device to be
11 switched, or turning on or off the power to a data storage device to be switched;

12 the signal is generated by a user altering the state of a physical switch different from
13 an on-off switch of the computer and exposed on an exterior surface of the main computer
14 hardware box of the computer;

15 the step of repairing software comprises automatically repairing software on the first
16 boot device without further direction from the user according to preset preferences, the preset
17 preferences selected from the set consisting of repairing according to whether (i) to recover
18 data, (ii) to run a virus check, (iii) to reformat the first boot device, (iv) to revert to a backup;
19 (v) to run diagnostics, and (vi) combinations thereof.

20 14. The method of claim 6, wherein before the step of repairing software the
21 following step is performed: offering a user a choice of thoroughness of repair selected from
22 the set of repairs consisting of a quick repair that re-installs or copies template software
23 without first re-formatting, a better repair that performs a high-level re-format before that
24 copy or re-installation of software, and a best repair that performs a low-level re-format
25 before copying over or re-installing software.

26 15. The method of claim 8, wherein the signal indicating a need for repair is
27 either: (i) self-generated by the computer without human intervention; or (ii) generated by
28 the computer in response to a single action by an external user, said single action selected
29 from the set of actions consisting of: pressing a key or combination of keys on a keyboard of

1 the computer and pressing or changing the state of a physical switch different from an on-off
2 switch of the computer and exposed on an exterior surface of the main computer hardware
3 box of the computer.

4 16. The method of claim 8, wherein the step of repairing software comprises:
5 automatically repairing software on the first boot device according to preset preferences
6 without further direction from the user, the preset preferences designating to repair the
7 computer according to whether: to recover data, to run a virus check, to reformat the first
8 boot device, to revert to a backup, or to run diagnostics.

9 17. The method of claim 8, wherein the step of repairing software comprises:
10 reformatting the first boot device and then copying software onto the first boot device; or
11 resetting parameters in a persistent memory and then copying software onto the first boot
12 device.

•13 18. The method of claim 8, wherein:

•14 before booting from the second boot device, software is installed onto the second boot
15 device; and the installing software onto the second boot device comprises one of: (a)
16 installing software onto the second boot device; (b) copying installed software onto the
17 second boot device; (c) copying installation software onto the second boot device; and (d)
18 writing onto the second boot device a version of an operating environment running as a result
19 of the boot from the first boot device; and

20 after the installing software onto the second boot device and before the booting from
21 the second boot device, protecting the second boot device from further modification; the
22 protecting selected from the set of protective measures consisting of (i) switching the second
23 boot device to a state of unavailability; and (ii) switching the second boot device to a read-
24 only state.

25 19. The method of claim 7, wherein before the step of repairing software the
26 following step is performed: offering a user a choice of thoroughness of repair selected from
27 the set of repairs consisting of a quick repair that re-installs or copies template software
28 without first re-formatting, a better repair that performs a high-level re-format before that

1 copy or re-installation of software, and a best repair that performs a low-level re-format
2 before copying over or re-installing software.

3 20. The method of claim 13, wherein before the step of repairing software the
4 following step is performed: offering a user a choice of thoroughness of repair selected from
5 the set of repairs consisting of a quick repair that re-installs or copies template software
6 without first re-formatting, a better repair that performs a high-level re-format before that
7 copy or re-installation of software, and a best repair that performs a low-level re-format
8 before copying over or re-installing software.